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ABSTRACT

This study evaluates the effectiveness of Study Unlimited, an off-campus instructional program cooperatively offered at area public libraries by Black Hawk College and the River Bend Library System (Illinois), in serving "new" student populations (adults over 25, males employed full-time, housewives, ethnic minorities, and adults attending college part-time) by removing the barriers of time and location. Study Unlimited offers regular college credit courses on a variable-entry, self-paced basis by use of instructional media. Demographic characteristics of the Study Unlimited (SU) population are compared to those of the general college and the college district. Results show that SU students were older than the general college population, 82% of the SU students were part-timers, over 65% were employed, over 61% were married, over 46% were new to Black Hawk College, over 57% were females, and there were no racial/ethnic group differences in distribution between SU students and the general college population. While the SU students differed somewhat from the college district population, notably in terms of ethnic group membership, they were similar in terms of sex, employment, and marital status. A bibliography is appended. (JDS)

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THE EFFECTIVENESS OF "STUDY UNLIMITED" IN SERVING NEW STUDENT POPULATIONS IN THE COMMUNITY

by
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A PRACTICUM PRESENTED TO NOVA UNIVERSITY
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ABSTRACT

TITLE: The Effectiveness of "Study Unlimited" in Serving New Student Populations in the Community

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This study undertook an evaluation of the effectiveness of a comparatively new off-campus instructional program at Black Hawk College, Moline, Illinois. "Study Unlimited" is a cooperative program of the college and the River Bend Library System to offer college courses in area public libraries. This study analyzed the effectiveness of this program in serving new student populations in the community by means of a demographic study of those student characteristics that distinguish the "New Student" and for which data was available. The analysis compared the "Study Unlimited" student population to the general college population and to the population of the college district. It found that over 82% of students enrolled in "Study Unlimited" were part-time students; over 65% were employed; over 61% were married; over 60% were aged 25 or older; and over 46% were new to Black Hawk College. It concluded that students enrolled in "Study Unlimited" were older than traditional community college students and included more part-time students. These students closely resembled the college district population in relation to distribution by sex, employment status, and marital status.

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I. THE TITLE: The Effectiveness of "Study Unlimited" in Serving New Student Populations in the Community

II. STATEMENT OF THE PROBLEM:

On June 1, 1975, Black Hawk College, Quad-Cities Campus, Moline, Illinois, entered a cooperative agreement with the River Bend Library System, the local state library district, to offer college credit courses and preparation for the G.E.D. examination on a variable-entry, self-paced basis by means of the use of instructional media at local public libraries. This program called "Study Unlimited" was modeled on a similar program of the same name operating in Chicago. The college's motivation to enter the program was to serve new student populations in the college district by removing the barriers of time and location. The purpose of this study is to determine whether or not this program has been effective in serving such new student populations. It will do so by making a statistical comparison of "Study Unlimited" students and the general college population and of "Study Unlimited" students and college district residents to determine (1) whether or not "Study Unlimited" is serving a student population that is more similar to the population of the college district than the enrollment in the total college is and (2) whether or not "Study Unlimited" is serving students that may be called "New Students" to a greater extent than the total college is.

III. THE HYPOTHESES:

The effectiveness of "Study Unlimited" in serving new student populations in the community is to be determined by testing the

following null hypotheses: (1) The age distribution of students in the "Study Unlimited" program is no different than the age distribution of students in the general college population. (2) The proportion of part-time students enrolled in the "Study Unlimited" program is no greater than the proportion of similar students in the general college population. (3) The proportion of female students enrolled in the "Study Unlimited" program is no greater than the proportion of similar students in the general college population. (4) The distribution of students according to membership in ethnic/racial groups is no different than the distribution of students in the general college population. (5) The age distribution of students in the "Study Unlimited" program is no different than the age distribution of college district residents. (6) The proportion of students enrolled in "Study Unlimited" who are members of the female sex is no greater than the proportion of similar college district residents. (7) The distribution of "Study Unlimited" students according to membership in ethnic/racial groups is no different than the distribution of college district residents. (8) The proportion of students enrolled in "Study Unlimited" who are employed is no greater than the proportion of similar college district residents. (9) The proportion of students in the "Study Unlimited" program who are married is no greater than the proportion of similar college district residents. (10) On the average, "Study Unlimited" students do not resemble "New Students."

IV. BACKGROUND AND SIGNIFICANCE OF THE STUDY

Since 1971, in the interests of greater social justice, the

Newman Report,[1] the Carnegie Commission on Higher Education,[2] the Commission on Non-Traditional Study,[3] and the Educational Amendments of 1972 to the Higher Education Act of 1965 have all called for an extension of the services of higher education to presently unserved student groups.

The idea of opening access to higher education for new students is actually much older than most realize, for, as Cyril Houle has pointed out, in the 1880's the concept was originally imported to this country from England. However, after a "mushroom growth," it just as quickly died out. It was revived shortly after 1900 in the land-grant, urban, and general state universities, and, increasingly through the twentieth century, it has employed the use of off-campus teaching sites; the scheduling of classes at times convenient to the part-time student, like late afternoons and early evenings or on weekends; and the use of instruction by correspondence, radio, and television. By the late 1950's, these efforts had resulted in entire degree programs offered by extension.[4]

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[1]Frank Newman, chairman, Report on Higher Education, U.S. Department of Health, Education, and Welfare, March, 1971(Washington: Government Printing Office, 1971), p. 38.

[2]Carnegie Commission on Higher Education, The Purposes and the Performance of Higher Education in the United States Approaching the Year 2000(New York: McGraw-Hill Book Company, 1973), p. 10.

[3]Samuel B. Gould and K. Patricia Cross, editors, Explorations in Non-Traditional Study(San Francisco: Jossey-Bass Publishers, 1972), p. 4.

[4]Cyril O. Houle, The External Degree(San Francisco: Jossey-Bass Publishers, 1974), p. 7.

From the very beginning of the extension movement, many were aware that adults could not be treated like teenagers, but it was not until the rush of World War II veterans to college campuses that colleges really began to make alterations in existing patterns to accommodate the adult student.[1] However, one of the most significant events in fostering the growth of what has come to be called "non-traditional study" was the granting of a Royal Charter to England's "Open University" in 1969.

In commenting on the significance of the Open University, Sir Walter Perry, its vice chancellor, points out that universities originally served three purposes: "preserving and nurturing scholarship," providing vocational training, and providing "a sort of finishing school for the children of the wealthy and nobly born." However, he points out that two conditions have served to alter these original purposes. An accelerating increase in the proportion of those attending college has changed the nature of most of the students so that they are no longer "scholars by nature," and, with this increase in the number of students, colleges and universities have become larger, more impersonal, and "more institutionalized." In addition, the length of time spent in education has been extended so that now most of the "able youth" spend "most of their active and creative years not as they should, in contributing to society, but in studying how to do so." Thus, it is necessary to reduce the duration of time spent in higher education

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[1]Houle, p. 10.

and to expand the number of those exposed to it. In Perry's view, one result of such general aims has been the development of institutions like the Open University, which has no entrance requirements, is designed for employed adults, calls for part-time learning at home, and has high standards.[1]

Another historical marker in the movement toward non-traditional study was the student revolts of the 1960's, a broad movement that caused adults to question the purpose and nature of higher education. One reason for the evaluation of higher education undertaken in 1970 by a task force appointed by the U.S. Department of Health, Education, and Welfare and chaired by Frank Newman, was the events of the 60's, including the "isolation of students and faculty from the world" and "overemphasis on academic credentials."[2] More specifically, the report of the committee describes an increasingly large number of college students as "drifters" who "not only prefer the campus atmosphere, but fear and distrust the society whose values they question."[3] As a result, the Newman Report urges that the "lock-step" of traditional university life be broken; that students interrupt their academic training with

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[1]Sir Walter Perry, "A National Commitment: An International Concept," in Designing Diversity '75, Proceedings of the 2nd National Conference on Open Learning and Non-Traditional Study, June 17-18, 1975, Washington, D.C.(Lincoln, Nebraska: University of Mid-America, 1975), pp. 12-14.

[2]Newman, p. vii.

[3]Ibid., p. 7.

job experiences or with time spent off-campus; and that off-campus education be established for the young who do not chose to attend college, for women, for those seeking new careers, and for the disadvantaged.[1]

In 1971 as well, the Carnegie Commission on Higher Education issued a report on enrollment predictions--New Students and New Places--that clearly demonstrates another reason for opening access. Although over the last one hundred years enrollment in higher education has doubled every 14 or 15 years, this report clearly states "never again." Instead, it predicts no growth between 1980 and 1990 and an increase of about one-third from 1990 to 2000.[2] The Commission further predicts that this change in enrollment patterns will open higher education to the poor and to the older student.[3]

However, probably the most significant event relating to non-traditional study in the early 1970's was the creation of the Commission on Non-Traditional Study, which initially met three times in 1971. This commission was sponsored by the College Entrance Examination Board and the Educational Testing Service and was funded by the Carnegie Foundation. It was chaired by Samuel B. Gould and included others, either as members of the commission or

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[1]Newman, p. 69.

[2]Carnegie Commission on Higher Education, New Students and New Places[New York: McGraw-Hill Book Co., 1971], p. 1.

[3]Ibid., p. 2.

of its staff, who have ultimately become leaders in non-traditional study, most notably Cyril O. Houle, Ledland Medsker, K. Patricia Cross, and John R. Valley. The major work and recommendations of the commission are presented in four books: K. Patricia Cross, Beyond the Open Door: New Students to Higher Education, 1971; Gould and Cross, editors, Explorations in Non-Traditional Study, 1972: the Commission on Non-Traditional Study. Diversity by Design, 1973; and Houle, The External Degree, 1975.

It was Cross, in Beyond the Open Door, who called attention to the "New Students," whom she defined as "those scoring in the lowest third among national samples of young people on traditional tests of academic ability."[1] Their fathers work at blue-collar jobs, and, in general, their parents have never attended college. Their reason for attending college is "rising educational aspirations of the citizenry"--to achieve a better way of life and a better job than their parents have.[2]

More recently, in Accent on Learning, she has commented on her original definition of the term "New Student" and upon new meanings that it has subsequently taken on--adults, students from lower economic levels, members of ethnic minorities, and women. Although these students are new to higher education and "non-traditional in the sense that they differ demographically from traditional college students," she still prefers to define the "New Student" as those

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[1] K. Patricia Cross, Beyond the Open Door: New Students to Higher Education (San Francisco, Jossey-Bass Publishers, 1971), p. 13.

[2] Ibid., p. 15.

who have been unsuccessful in school for these "present the major challenge to educators."[1] Two-thirds of these students are first-generation college students; and over 50% are white, about 25% are black, and about 15% are members of other minority groups. Although over one-half of those in the lowest third of their high school classes are Caucasian, ethnic minorities are over-represented in the group. However, not all members of ethnic minorities are New Students, for some are well-qualified for higher education. Similarly, Cross explains that, although New Students tend to come from homes that are economically disadvantaged, not all of them do.[2] Clearly, then, Cross' definition of the "New Student" was and still is based on academic achievement only.

However, modifications of Cross' definition of the New Student have not only resulted from confusion but also have occurred because of what has taken place within college enrollments since 1970. With predictions of a stabilization of growth in college enrollments in the 80's, higher education has come to seek "new students" where they can be found, and the emphasis upon opening access to new students in the interest of greater social justice has shifted to a pragmatic search for any new clientele. Hodgkinson, a member of the Commission on Non-Traditional Study, points out that, while at one time "new students" were expected to be

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[1] K. Patricia Cross, Accent on Learning[San Francisco: Jossey-Bass Publishers, 1976], p. 4.

[2] Ibid., p. 6.

women, members of ethnic minorities, the unemployed, and those new to higher education, in actual practice they have been found to be, in the majority, male, Caucasian, and middle class with some previous college experience.[1] A recent report characterizes "new learners" in Iowa as between the ages of 20 and 80, economically independent and self-supporting, preparing for a second career or concluding a career, in mobility limited to the local area,[2] more female than male, more urban than rural, and with better-than-average incomes.[3] Most of them have had some college experience and come from homes of the professional, the managerial, the white-collar worker, sales personnel, or the skilled craftsman.[4] Very often they are considered to be older than college age, quite possibly because this group is a good potential source of new clientele. For example, a committee in California has found that most of that state's population growth will be in age groups over 35.[5] David Miller characterizes the "new students" as those who are limited occupationally without college, the unemployed needing new skills,

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[1]Harold L. Hodgkinson, "Technology and Education," in Designing Diversity '75, p. 50.

[2]I. Bruce Hamilton, The Third Century: Postsecondary Planning for the Nontraditional Learner, a Report Prepared for the Higher Education Facilities Commission of the State of Iowa, Office of New Degree Programs, Educational Testing Service, May, 1971, pp. 16-17.

[3]Ibid., p. 31.

[4]Ibid., p. 32.

[5]Richard E. Peterson and JB Lon Hefferlin, Post Secondary Alternatives to Meet the Educational Needs of California's Adults, Final Report of a Feasibility Study Prepared for the California Legislature[September, 1975], p. 16.

women who want careers after raising their families, the retired seeking cultural enrichment and those--like pilots and pharmacists--who need recertification as required by law.[1] Houle sees the greatest potential clientele for non-traditional programs in the large number of adults "who were born too early to take advantage of the widespread opportunities made available to younger men and women through the expansion of facilities of higher learning." Now, "caught up in the pressures and concerns of mature life," they wish to enter or to re-enter post-secondary education.[2]

In summary, clearly Cross' original definition of the "New Student" has been changed. One reason is that the charge to extend the services of postsecondary education to previously unserved student groups in the interest of greater social justice has become joined with the concern of the colleges themselves to attract any new student populations because demographers have shown that these colleges are running out of the traditional, college-aged, full-time students. In addition, the definition has been changed because in actual practice it has been found that many--especially women and older students--although not economically disadvantaged or limited in academic achievement or members of ethnic/racial

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[1]David Miller, Open Universities in the United States, Four Models and Recommendations, U.S. Educational Resources Information Center, ERIC Document ED 071629, October, 1973, p. 3.

[2]Houle, p. 46.

minority groups--were denied access to higher education or did not chose to take advantage of it when they were of traditional age.

Later work and publications of the Commission on Non-Traditional Study have further emphasized the need to open access to higher education and have sought to define the "New Student." In 1972, Explorations in Non-Traditional Study repeated the need to expand access to those people who have been largely ignored up to now--specifically women after their children leave home, war veterans, the retired, inmates, those who seek job advancement, and those in need of continuing education--[1] students "who do not fit the mold."[2] Also in Explorations, the public library was suggested as a "major educational center or base for the learning experiences" of these new students.[3]

Diversity by Design of 1973 is the official report of the Commission on Non-Traditional Study. It calls for sweeping changes in higher education to broaden access, reshape institutions, and create alternatives. The Commission concludes that many people still find higher education to be too expensive, too rigid in formal requirements, and inaccessible in time and place.[4] It predicts

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[1]Gould and Cross,, p. 4.

[2]Ibid., p. 17.

[3]Ibid., p. 26.

[4]Commission on Non-Traditional Study, Diversity by Design (San Francisco: Jossey-Bass Publishers, 1975), p. 19.

that education will cease being viewed as a "single opportunity of a lifetime"; it will become "the total opportunity for a lifetime."[1] Thus, increasingly, people will periodically set aside a time to study some topic--what the Commssion calls "recurrent education."[2] The Commission also includes in its recommendations one that was to be important in designing non-traditional programs: "Students of traditional college age should have available to them the same non-traditional opportunities as adult students."[3]

One of the "non-traditional opportunities" recommended by the Commission was thoroughly outlined in Houle's The External Degree, a book sponsored by the Commission. This is a new type of college degree designed for a new clientele--those who want not intensive but "prolonged instruction" suited to "a more mature lifestyle" and using new techniques of teaching and learning.[4] This degree is characterized by open admissions, part-time enrollments, new audio-visual education that can conquer the barriers of space and time, and methods for assessing prior learning and translating it into college credit. This external degree is aimed at three major groups of new students--those who were good students but who laced the opportunity for or did not take advantage of higher

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[1] Diversity by Design, p. 12.

[2] Ibid., p. 24.

[3] Ibid., p. 33.

[4] Houle, pp. 63-64.

education; those of unusually high ability, especially women and business executives; and those who fall below the usual standards for college admission. Thus, Houle's definition of the "New Student" is considerably expanded over Cross'. He estimates that presently there are 79.8 million "would-be learners" in this country and 32.1 million "learners," those currently involved in receiving instruction.[1]

The national prediction of a stabilization of or even of a decline in enrollment in postsecondary education in the 1980's is even now being demonstrated to be true in Illinois and at Black Hawk College. Enrollment this fall semester is down, and preliminary reports indicate that much the same is true at other community colleges in the state. Although the cause of the decline may be economic conditions, such enrollment trends, however, can be predicted by demographic findings and are inevitable unless new student populations are served by the college. Appendix A provides a summary by age of total populations for those three Illinois counties comprising the majority of the Black Hawk College district and based upon data from the 1970 U.S. Census. Those children who were approximately aged 11, 12, and 13 in 1970 today would be approximately aged 17, 18, and 19--of of traditional community college age. The mean population in each of these ages as tabulated by the census was 4880. The mean population for those chilren who will be of traditional community college age in 1986, 1987, 1988, and 1989--those who

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[1]Houle, p. 149.

were under age 5 at the time of the 1970 Census--was 5111. Thus, between now and 1989, the Black Hawk College district can expect only a slight increase in residents of traditional community college age--less than 5%. The full significance of these demographics is evident when a comparison is made between the number of residents of the district in 1970 of traditional community college age and, based upon the same census data, the number that could be predicted for 1976. In 1970, there was a population of approximately 12,059 of 17-, 18-, and 19-year-olds. Based upon the same data, it could be expected that there would be in 1976 a similar population of 14,640, an increase of approximately 21.4%. Of course, none of this data or these projections provide adjustments for decreases because of migrations of new residents into the district. Nevertheless, it seems that the sources for growth in enrollment from among those of traditional community college age will increase only slightly between now and the late 1980's and can not be expected to increase at anywhere near the same rate as in the past. Clearly, if the college is to continue to grow, it must either attract a larger percentage of those who are of traditional community college age, probably many from the lowest third of high school graduating classes, or it must attract a larger percentage of the adult population--those above traditional community college age. In both cases, these sources of additional enrollment are from among those termed "New Students."

The potential among these two groups for new enrollments is great. In 1973, 68% of the entering freshmen at Black Hawk College

had received high-average to very high grades in high school, and 32% came from those with low-average to low high school grades.[1] In 1973, also, the Quad-Cities Campus of Black Hawk College served a population area of 153,600, of whom 65% were 18 years of age or older. Thirty-eight percent of this population aged 18 or older had not completed high school, and an additional 33-40% had no college degree or vocational training. Thus, in its college credit or adult basic education programs, Black Hawk College has a potential target population of approximately 85,000.[2] At the same time, however, college-credit enrollments still depended heavily upon the traditional college student. In 1973, the college enrolled 5,159 people in credit courses, of whom 22.8% were age 26 or older. In this group, over one-half(52.1%) were age 18-21, or traditional community college age.[3]

To increase access to higher education in the interest of social justice and to seek to tap new sources of student population, Black Hawk College has already begun to remove those barriers of rigidity in formal requirements and inaccessibility in terms of time and place that were delineated by the Commission on Non-Traditional Study in Diversity by Design. For some time, the college has participated in the College Level Examination Program(CLEP), the

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[1] Black Hawk College Self-Study Report, prepared for the North Central Association of Colleges and Secondary Schools, Moline, Illinois, December 2, 1974, p. 96.

[2] Ibid., p. 95.

[3] Ibid., p. 99.

United States Armed Forces Institute(USAFI), and the Cooperative Assessment of Experiental Learning[CAEL]. During the 1972-73 academic year, the college initiated its liberal studies associate degree program "to provide the mature student with the opportunity to deviate from the structured programs of the College"[1] and "to provide curricula or courses for identifiable populations not previously served by the College."[2] This A.L.S. degree recognizes and facilitates a student's receiving credit for prior learning in order to provide "entry into the academic world to those who previously felt themselves excluded from it."[3] Thus, Black Hawk College has begun to remove the rigidity of formal requirements for the "New Student."

In addition, the College seeks to serve the "New Student" by means of programs designed to make the College more accessible in terms of location and time. Many college courses are offered on an individualized, variable entry/exit basis "to provide students with a more flexible learning experience,"[4] or, in short, to attempt to break through inaccessibility in terms of time to accommodate more readily the part-time student, the full-time worker, and the individual with shifting work hours. Also, beginning in the spring

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[1] Black Hawk College Self-Study Report, p. 53.

[2] Ibid., p. 54.

[3] Ibid., p. 120.

[4] Ibid., p. 118.

of 1974, the college has offered courses over cable television,[1] and it has also participated in all of the national "Courses-by-Newspaper" and in offering for college credit those courses available over open-air television broadcast, like "The Adams Chronicle."

On June 1, 1975, Black Hawk College entered a cooperative program--called "Study Unlimited"--with the River Bend Library System, the local state library district, to offer college-credit courses and preparation for the G.E.D. examination in area public libraries. The goal of this program is "to provide maximum access and scheduling flexibility to new students, especially to part-time students over 25."[2] It also seeks to provide "maximum access through its placement of courses in area public libraries," close to students' homes or jobs.[3] All courses are self-paced and offered on a variable entry/exit basis in six public libraries distributed throughout much of the area served by the Quad-Cities Campus and in the Learning Resource Center on campus. Thus, this program seeks specifically to enroll "The New Student" by removing the barriers of time and location. It does so, first of all, by the use of educational technology, which Virginia Trotter has called "one way of 'opening doors for new sorts of student populations.'"[4] All courses are offered in formats of videocassette, audiocassette, multi-media,

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[1] Black Hawk College Self-Study Report, p. 119.

[2] Charles E. Laws, Dean of Liberal Studies, Annual Report, 1975-76, Black Hawk College, Moline, Illinois. (Mimeographed)

[3] Ibid.

[4] "Communications Technology: Extending the Reach of Universities to People," Designing Diversity '75, p. 57.

or printed materials for home study. Secondly, it uses the resources of the local public library, called by the Commission on Non-Traditional Study "a major educational center or base for the learning experiences" of new student populations.[1]

For the most part, "Study Unlimited" offers traditional college courses in a non-traditional way. Thus, with the possible exception of its course to prepare for the G.E.D. examination, it cannot be said to serve nor does it aim to serve the "New Student" as defined by Patricia Cross--the low-academic achiever. Instead, it seeks to serve the "New Student" who is an adult, a part-time student, a full-time worker, a married woman seeking cultural enrichment or job training after her children are in school, or a married man seeking employment advancement. It aims to attract students who are new in the sense that they have never before attended Black Hawk College--the previously unserved populations identified in the literature on non-traditional study. Because they did not aspire to college as often in the past as others, this group can be expected to include more women and more members of ethnic/racial minority groups than the traditional college population.

Black Hawk College needs to attract new students such as these if it is to continue its growth patterns in the face of demographic trends predicting a stabilization of growth. That it should do so is made clear by a national charge to extend the opportunity for higher education to previously unserved populations. Although the

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[1] Explorations in Non-Traditional Study, p. 26.

college has sought to do so in a number of ways, much of its efforts have been in those programs that attempt to remove the barriers of time and space--programs that involve the use of cable or open-air television broadcast for course delivery and the use of the public library and educational media in "Study Unlimited." Faced with the largest budget deficit in its history and with the possibility of failing to secure passage of a referendum to increase the local property tax levy, Black Hawk College has begun a review of all programs. One important part of such a program review is a consideration of the program's potential for growth and for attracting new students. A study to determine the effectiveness of "Study Unlimited" in serving new student populations in the community is one important part of such a program review.

Because the work of this practicum requires the compilation and statistical analysis of demographic data for the college district population, the college population, and students enrolled in the "Study Unlimited" program to see if the program is serving new students and recognizable community population groups not currently well-served by the college, it is clearly related to the "Societal Factors" module.

V.DEFINITION OF TERMS

1. Black--a term used by Black Hawk College in reporting membership in ethnic categories. A member of the Negroid ethnic division, especially people native to central or outhern Africa or one of their descendents. In this practicum, used interchangeably with "Negro." The person responding on the college admissions forms determines himself whether or not he is a member of this group.

2. College District Residents--Those people living within the Black Hawk College district and tabulated by the 1970 U.S. Census, but subject to the following limitations in relation to the use of this census data. The best source of statistical data concerning the social, educational, and economic characteristics of residents of the college district is the U.S. Census, which provides a tabulation by county. The Black Hawk College district includes parts of nine counties, but over 70 percent of all land within the district is within three counties--Rock Island, Henry, and Mercer counties; and 96 percent of the district's population occurs within these three counties. Therefore, in order to use the U.S. Census data for comparison, in this practicum, the term college district residents will refer to those people living in Rock Island, Henry, and Mercer counties and counted in the 1970 U.S. Census.
3. Employment Status--Refers to whether or not a person is employed as defined by the 1970 U.S. Census. Thus, someone who is employed is a person age 14 or over who worked 15 hours or more a week during the week in which the census count was made or during the week before and who was not an inmate or was not in school. The unemployed includes those unable to work because of a disability or handicap.
4. Full-Time Student Academic Status--A student enrolled for 12 or more semester hours of college credit at Black Hawk College at the time he was counted.

5. General College Population--All students enrolled at the Quad-Cities Campus or the East Campus of Black Hawk College, including those enrolled for credit or non-credit in the University Parallel Program, the Careers Program, and the Adult Education Program.
6. Hispanic--A term used by Black Hawk College in reporting membership in ethnic categories. It refers to those having cultural origins in Spain or in those countries colonized by Spain. Included in this group are Chicanos and Spanish-surnamed and/or Spanish-speaking individuals. The person responding on the college admissions form determines whether or not he is a member of this group.
7. Married--Means currently married, even though not living with a spouse. Included are those who are in common-law marriages, those separated from spouses because of desertion but still legally married, those living apart from spouses because of discord but still legall married, those legally separated but still legally married, and those living apart from spouses as inmates or members of the armed forces for for other reasons of this sort but still legally married.
8. Negro--A term used to indicate membership in a minority group in the 1970 U.S. Census. Taken to mean a member of the Negroid ethnic division, especially people native to central or southern Africa or one of their descendents. In this practicum, used interchangeably with "Black." The person responding in the Census count determined himself whether or not he was a member of this group.

9. New Students--The term "New Students," as used in this practicum, refers to those who are over age 25, new to Black Hawk College, married women with full-time home responsibilities, married men with full-time employment, members of ethnic/racial minorities, adults attending college part-time.
10. New Students to Black Hawk College--Refers to those never before enrolled in college-credit courses or the course to prepare for the G.E.D. examination at the Quad-Cities Campus of Black Hawk College. This term is not used to efer to those readmitted or returning students, but it does include transfer students.
11. Other Minorities--A term used to count ethnic membership in the 1970 U.S. Census. Includes all ethnic minority groups except Blacks, especially American Indians, Hispanics, and Orientals.
12. Part-Time Student Academic Status--A student enrolled for fewer than 12 semester hours of college credit at Black Hawk College at the time he was counted. In this practicum, all students preparing for the G.E.D. examination are included in this category since that course equates to five hours or fewer of non-college credit.
13. Single--Means not currently married and including those whose marriages have been annulled and those divorced or widowed but not remarried.
14. Study Unlimited Students--Includes all those who have ever enrolled for a course section, either college-credit or G.E.D. preparation, offered in the Study Unlimited program from June 1, 1975, to October 1, 1976.

15. White--A category used by Black Hawk College to report ethnic group membership and also used by the 1970 U.S. Census for the same purpose. Refers to members of the Caucasian race. The individual himself determines whether or not he is a member of this group, either in responding to Census questions or in completing the Black Hawk College admissions form.
16. Worker--A term used in the 1970 U.S. Census to refer to those aged 14 or over who were employed 15 hours or more a week during the week in which the census count was made or during the week before and who were not inmates or in school. In the Black Hawk College student population, the term is used in this practicum to refer to those students who, in responding on their admissions form, indicated that they were employed 15 hours per week or more.

VI. LIMITATIONS OF THE STUDY

1. Limitations within the Data--These are of four fundamental types. First of all, there are limitations within the 1970 U.S. Census data and its use. It is not current; it does not satisfactorily identify minority groups other than Blacks, especially the Hispanic; and, because it is tabulated by county and not by community college district, only an approximation of the college district by county can be made. Second, there are limitations within Black Hawk College student data. This data does not include information on marital or employment status; it often has not been updated since the student initially completed his admissions form; its tabulation by age does not make it possible to compute an average age; and, especially in relation to ethnic category and age, too many individuals failed or refused to indicate. And, third, because the U.S. Census and Black Hawk College data does not use the same categories and definitions in all cases, conversions must at times be made to allow a comparison. Of course, there is the possibility for error in these conversions.
2. Limitations within the Research Design--Because this research is historical--it describes what has occurred--its findings cannot be extended with much certainty beyond the time frame under study or the specific individuals included. Second, community characteristics delineated in the 1970 census will be compared to characteristics of the general college population in the fall of 1975 and to characteristics of Study Unlimited students from June 1, 1975, to October 1, 1976. There is the possibility for

error in the comparison of data as widely different in time as this. However, this is the best data available. Third, because of inadequacies in institutional student data, comparisons involving average age, marital status, number of married men, and number of married women can not be made.

VII. BASIC ASSUMPTIONS

It is assumed in this study that data compiled from the U.S. Census for 1970 is accurate and that data from Rock Island, Henry, and Mercer counties provide an accurate demographic profile of the population of the Black Hawk College district. It is assumed that student data provided by Black Hawk College's Research Analyst is accurate, and, in relation to this data, it is further assumed that, in its tabulation of ethnic membership and age especially, those students for whom information is not available or who did not indicate an answer will not skew the other results significantly. It is assumed that data on Study Unlimited students is accurate and that, once again, a lack of data on some students will not skew the results significantly.

VIII. PROCEDURES FOR COLLECTING DATA

1. Based upon information from the 1970 U.S. Census, a profile of the college district's population was compiled, based upon those demographic characteristics for which data was available and most likely to distinguish the type of new student that the "Study Unlimited" program seeks to serve--membership in ethnic/racial groups, sex, age, employment status, and marital status.
2. Based upon information from Black Hawk College's Research Analyst, a similar profile of the college's total district student population for the fall of 1975, the most recent semester for which data is available, was compiled, once again based upon those demographic characteristics most likely to distinguish the type of new students that the "Study Unlimited" program seeks to serve--membership in ethnic/racial groups, sex, age, and student academic status. In collecting this data, it was determined that the college student data collection does not tabulate students on the basis of their marital or employment status; therefore, such data was not available.
3. Based upon information compiled by the Study Unlimited coordinator from student admission forms, a profile of students enrolled in the Study Unlimited program from its beginning on June 1, 1975, to October 1, 1976, was compiled, once again based upon those demographic characteristics most likely to distinguishe the type of new student that the "Study Unlimited" program seeks to serve--membership in ethnic/racial minorities, sex, age, employment status, and marital status.

IX. PROCEDURES FOR TREATING DATA

1. Hypothesis 1: The age distribution of students in the "Study Unlimited" program is no different than the age distribution of students in the general college population. This is the first of several null hypotheses which serve to test if the differences between the general college student body and students enrolled in the "Study Unlimited" program in relation to selected characteristics of the "new student" are statistically significant. To determine the validity of this hypothesis, the comparison was made on the basis of distribution of students by age using those categories established by the college in its reporting system and on which data was available: those age 17 or younger, age 18-20, age 21-24, age 25-35, age 36-40, age 40 or older. The number in the "unknown" category in both sets of data was noted but was not included in the statistical analysis. The $\bar{X}^2$ test for "goodness of fit" was used at a critical level of .05. If the results exceeded this level, the first hypothesis was rejected.

2. Hypothesis 2: The proportion of part-time students enrolled in the "Study Unlimited" program is no greater than the proportion of similar students in the general college population. This hypothesis required a comparison of the two populations on the basis of academic status, either full-time or part-time. The $\bar{X}^2$ test at a critical level of .05 was used to test whether or not differences between the two populations in academic status were statistically significant. If the results exceeded this level, the second hypothesis was rejected.

3. Hypothesis 3: The proportion of female students enrolled in the "Study Unlimited" program is no greater than the proportion of similar students in the general college population. The $\bar{x}^2$ test at a critical level of .05 was used to test whether or not differences between the two populations in relation to sex were statistically significant. If the results exceeded the level, the third hypothesis was rejected.

4. Hypothesis 4: The distribution of "Study Unlimited" students according to membership in ethnic/racial groups is no different than the distribution of students in the general college population. To test this hypothesis, categories used in the 1970 U.S. Census were used: white, negro, and other minorities. The $\bar{x}^2$ test of "goodness of fit" was used at a critical level of .05, and, if the results exceeded this level, the hypothesis was rejected.

5. Hypothesis 5: The age distribution of students in the "Study Unlimited" program is no different than the age distribution of college district residents. This is the first of several null hypotheses which serve to test if the differences between the students enrolled in the "Study Unlimited" program and the residents of the college district are statistically significant. Once again, the comparison was made on the basis of distribution of students and residents by age using those categories established by the college in its reporting system and on which data was available: those age 17 or younger, age 18-20, age 21-24, age 25-35, age 36-40, age 40 or older. The number in the "unknown" category in student data was noted but was not included in the

statistical analysis. The $\bar{X}^2$ test for "goodness of fit" was used at a critical level of .05. If the results exceeded this level, the hypothesis was rejected.

6. Hypothesis 6: The proportion of students enrolled in "Study Unlimited" who are members of the female sex is no greater than the proportion of similar college district residents. The $\bar{X}^2$ test at a critical level of .05 was used to test whether or not differences between the two populations in relation to sex were statistically significant. If the results exceeded the level, the sixth hypothesis was rejected.
7. Hypothesis 7: The distribution of "Study Unlimited" students according to membership in ethnic/racial groups is no different than the distribution of college district residents. Once again, to test this hypothesis, categories used in the 1970 U.S. Census were used: white, negro, and other minorities. The $\bar{X}^2$ test of "goodness of fit" was used at a critical level of .05, and, if the results exceeded this level, the hypothesis was rejected.
8. Hypothesis 8: The proportion of students in the "Study Unlimited" program who are employed is no greater than the proportion of similar college district residents. This comparison made use of the distinction in the U.S. Census: those employed 15 hours a week or more were considered "workers"; those employed fewer hours or not at all were considered "unemployed." The hypothesis was tested by a $\bar{X}^2$ test at a critical level of .05, and, if the results exceeded this level, the hypothesis was rejected.

9. Hypothesis 9: The proportion of students in the "Study Unlimited" program who are married is no greater than the proportion of similar college district residents. This comparison in relation to marital status divided the populations into two groups: those currently married and including the married living apart and those currently single and including the widowed and the divorced. To test this hypothesis, a $\bar{x}^2$ test at a critical level of .05 was used, and if the results exceeded that level, the hypothesis was rejected.

10. Hypothesis 10: On the average "Study Unlimited" students do not resemble "New Students." To test this hypothesis, no statistical test was possible; instead, descriptive analysis was used. A statistical profile of the "Study Unlimited" student population in relation to number of married men, number of married women, average age, and the number new to Black Hawk College was constructed. The results were stated simply as percentages. They provide statistical knowledge of demographic characteristics of "Study Unlimited" students and were used as a basis to conclude whether or not these students resembled new students in these respects.

A summary of the findings of these tests served as the basis of an evaluation of the relative effectiveness of the "Study Unlimited program in attracting "new students" into college programs and the relative effectiveness of all college programs in doing so. This summary also evaluated the college's relative effectiveness in serving recognizable groups as delineated by the characteristics

studied within the community and the relative effectivenss of the "Study Unlimited" program in the same way.

X. RESULTS

Hypothesis 1:The age distribution of students in the "Study Unlimited" program is no different than the age distribution of students in the general college population.

Data Resulting from the Study: Table 1 just below presents a summary of the data collected in relation to the ages of students enrolled in "Study Unlimited" from June 1, 1975, to October 1, 1976, and of students in the general college population during the fall semester of 1975.

TABLE 1
DISTRIBUTION OF STUDENTS BY AGE

	Study Unlimited		General College	
	Number	Percentage	Number	Percentage
17 or younger	2	.7	436	7.5
18-20	45	16.5	2058	35.5
21-24	55	20.1	1073	18.5
25-35	102	37.4	1327	22.9
36-40	26	9.5	314	5.4
41 or older	43	15.8	591	10.2
Total	273	100.0	5799	100.0
Unknown	58		3458	

In the data on students enrolled in "Study Unlimited," ages for 58 of the 331 in the group were unknown. In the data on the general college population , ages for 3,458 of the 9,257 in the group were unknown. These numbers are noted, but were not used in any way in the statistical analysis of this data summarized below.

Analysis of the Data: A two-tailed $\bar{X}^2$ test at a critical level of significance of .05 was used to determine if there was a statistically significant difference between the distribution of students by age in the two groups. In Table 2, which summarizes the calculation of this test as used in relation to Hypothesis 1, f_o refers to the "Study Unlimited" student population, and f_e refers to the general college population. The numbers under f_o and f_e refer to percentages of the totals for each of these groups.

TABLE 2: CALCULATION OF $\bar{X}^2$

Cell	f_o	f_e	f_o-f_e	$(f_o-f_e)^2$	$\frac{(f_o-f_e)^2}{f_e}$
17 or younger	.7	7.5	- 6.8	46.24	6.17
18-20	16.5	35.5	-19.0	361.00	10.17
21-24	20.1	18.5	1.6	2.56	.14
25-35	37.4	22.9	14.5	210.30	38.94
36-40	9.5	5.4	4.1	16.81	3.11
41 or older	15.8	10.2	5.6	31.36	3.07
				$\bar{X}^2=$	61.60

$\alpha = .05$
$df = 5$
$\alpha = 11.07$

$$\bar{X}^2 = \sum \left[\frac{(f_o-f_e)^2}{f_e} \right]$$

f_o=observed frequency
f_e=expected frequency

Significance of the Data: Since the calculated value of $\bar{X}^2$ exceeds the critical value, the null hypothesis was discarded, and the corresponding affirmative hypothesis accepted: The age distribution of students in the "Study Unlimited" program is different than the age distribution of students in the general college population. Additionally it should be noted in Table 2 that the two populations differ most significantly in the 18-20 and the 25-35 categories. The "Study Unlimited" program enrolls significantly fewer students between the ages of 18 and 20 and significantly more students between the ages of 25 and 35 than all college programs in general.

Hypothesis 2: The proportion of part-time students enrolled in the "Study Unlimited" program is no greater than the proportion of similar students in the general college population.

Data Resulting from the Study: Table 3 just below presents a summary of the data collected in relation to the academic status of the two groups.

TABLE 3
DISTRIBUTION OF STUDENTS BY ACADEMIC STATUS

	Study Unlimited		General College	
	Number	Percentage	Number	Percentage
Full-Time Students	52	17.7	not avail.	32
Part-Time Students	241	82.3	not avail.	68
Total	293	100.0	not avail.	100
Unknown	38		not avail.	

Once again, the number of students on whom no information is available was noted but not used in the statistical analysis.

Analysis of the Data: A two-tailed $\bar{X}^2$ test at a critical level of significance of .05 was used to determine if there was a statistically significant difference between the distribution of students by academic status in the two groups. In Table 4, which summarizes the calculation of this test f_o refers to the "Study Unlimited" student population and f_e refers to the general college population. The numbers under f_o and f_e refer to percentages of the totals for each of these two groups.

TABLE 4: CALCULATION OF $\bar{X}^2$

Cell	f_o	f_e	f_o-f_e	$(f_o-f_e)^2$	$\frac{(f_o-f_e)^2}{f_e}$
Full-Time Students	17.7	32	-14.3	204.49	6.39
Part-Time Students	82.3	68	14.3	204.49	3.01
					$\bar{X}^2=9.40$

$\alpha=.05$
$df=1$
$\alpha=3.84$

$$\bar{X}^2 = \sum\left[\frac{(f_o-f_e)^2}{f_e}\right]$$

f_o=observed frequency
f_e=expected frequency

Significance of the Data: Since the calculated value of $\bar{X}^2$ exceeds the critical value, the null hypothesis was rejected, and the corresponding affirmative hypothesis accepted: The proportion of part-time students enrolled in the "Study Unlimited" program is greater than the proportion of similar students in the general college population. It should be noted additionally that over twice as many part-time students are enrolled in the "Study Unlimited" program as in the general college programs.

Hypothesis 3: The proportion of female students enrolled in the "Study Unlimited" program is no greater than the proportion of similar students in the general college population

Data Resulting from the Study: Table 5 just below presents a summary of the data collected in relation to membership in the female sex from the two groups.

TABLE 5
SEX MEMBERSHIP OF STUDENTS

	Study Unlimited		General College	
	Number	Percentage	Number	Percentage
Male	138	42.2	Not Avail.	47
Female	189	57.8	Not Avail.	53
Total	327	100.0	Not Avail.	100
Unknown	1		Not Avail	

Once again, the number of students on whom no information is available was noted but not used in the statistical analysis.

Analysis of the Data: A two-tailed $\overline{X}^2$ test at a critical level of significance of .05 was used to determine if there was a statistically significant difference between the distribution of students by membership in sexes. In Table 6, which summarizes the calculation of this test, f_o refers to the "Study Unlimited" student population, and f_e refers to the general college population. The numbers under f_o and f_e refer to percentages of the totals for each of these two groups.

TABLE 6: CALCULATION OF $\bar{x}^2$

Cell	f_o	f_e	f_o-f_e	$(f_o-f_e)^2$	$\frac{(f_o-f_e)^2}{f_e}$
Male	42.2	47	-4.8	23.04	.49
Female	57.8	53	4.8	23.04	.43
					$\bar{x}^2 = .92$

$\alpha = .05$
$df = 1$
$\alpha = 3.84$

$$\bar{x}^2 = \sum \left[\frac{(f_o-f_e)^2}{f_e} \right]$$

f_o=observed frequency

f_e=expected frequency

Significance of the Data: Since the calculated value of $\bar{x}^2$ does not exceed the critical value, the null hypothesis was retained: the proportion of female students enrolled in the "Study Unlimited" program is no greater than the proportion of similar students in the general college population. Although the percentage of female students enrolled in the "Study Unlimited" program was higher than the percentage in the general college population, it was not sufficiently higher so as to be significantly different at a confidence level of .05.

Hypothesis 4: The distribution of "Study Unlimited" students according to membership in ethnic/racial groups is no different than the distribution of students in the general college population.

Data Resulting from the Study: Table 7 just below presents a summary of the data collected in relation to membership in ethnic/racial groups from the two populations.

TABLE 7
MEMBERSHIP IN ETHNIC/RACIAL GROUPS

	Study Unlimited		General College	
	Number	Percentage	Number	Percentage
White	246	88.49	Not Avail.	88.9
Black	15	5.40	Not Avail.	5.6
Other	17	6.11	Not Avail.	5.5
Total	278	100.00	Not Avail.	100.0
Unknown	50		Not Avail.	

Once again, the number of students for whom no information was available was noted but not used in the statistical analysis. The College Research Analyst reported that approximately 28% of students in the general college population did not respond to this question on the college admissions form.[1]

Analysis of the Data: A two-tailed $\bar{X}^2$ test at a critical level of confidence of .05 was used to determine if there was a statistically significant difference between the distribution of students

[1]Terry Kramer, College Research Analyst, Black Hawk College, Moline, Illinois.

by membership in ethnic/racial groups. In Table 8, which summarizes the calculation of this test, f_o refers to the "Study Unlimited" student population, and f_e refers to the general college population. The numbers under f_o and f_e refer to percentages of the totals for each of these groups.

TABLE 8: CALCULATION OF $\bar{x}^2$

Cell	f_o	f_e	f_o-f_e	$(f_o-f_e)^2$	$\frac{(f_o-f_e)^2}{f_e}$
White	88.49	88.9	-.41	.1681	.00189
Black	5.40	5.6	-.20	.0400	.00714
Other	6.11	5.5	.61	.3721	.06800
				$\bar{x}^2$=	.07700

α=.05
df= 2
α=5.99

$$\bar{x}^2 = \sum \left[\frac{(f_o-f_e)^2}{f_e} \right]$$

f_o=observed frequency
f_e=expected frequency

Significance of the Data: Since the calculated value of $\bar{x}^2$ does not exceed the critical value, the null hypothesis was retained: the distribution of "Study Unlimited" students according to membership in ethnic/racial groups is no different than the distribution of students in the general college population.

Hypothesis 5: The age distribution of students in the "Study Unlimited" program is no different than the age distribution of college district residents.

Data Resulting from the Study: Table 9 just below presents a summary of the data collected in relation to age for the two groups. Since most people aged 17 are still in high school, the two students in "Study Unlimited" of this age were not considered in making the comparison, for to do so would greatly skew the results.

TABLE 9
DISTRIBUTION OF STUDENTS BY AGE

	Study Unlimited		College District	
	Number	Percentage	Number	Percentage
18-20	45	16.6	10,801	7
21-24	55	20.3	13,092	8.4
25-35	102	37.6	28,643	18.5
36-40	26	9.6	53,464	34.4
41 or older	43	15.9	49,202	31.7
Total	271	100.0	155,201	100.0
17 or younger	2			
Unknown	58			

In the data on students enrolled in "Study Unlimited," ages for 58 of the 331 in the group were unknown. This number is noted, but was not used in the statistical analysis of this data.

Analysis of the Data: A two-tailed $\bar{X}^2$ test at a critical level of confidence of .05 was used to determine if there was a statically significant difference between the distribution of the

two populations by age. In Table 10 just below, which summarizes the calculation of this test, f_o refers to the "Study Unlimited" student population, and f_e refers to the population of the college district. The numbers in the columns f_o and f_e are the percentages of the populations in each of the categories.

TABLE 10: CALCULATION OF $\bar{x}^2$

Cell	f_o	f_e	f_o-f_e	$[f_o-f_e]^2$	$\frac{[f_o-f_e]^2}{f_e}$
18-20	16.6	7.0	9.0	92.16	13.17
21-24	20.3	8.4	11.9	141.61	16.86
25-35	37.6	18.5	19.1	364.81	19.72
36-40	9.6	34.4	-24.8	615.04	17.87
41 or older	15.9	31.7	-15.8	249.64	7.88
					$\bar{x}^2$ =75.50

α = .05
df= 4
α =9.49

$$\bar{x}^2 = \sum \left[\frac{[f_o-f_e]^2}{f_e} \right]$$

f_o=observed frequency

f_e=expected frequency

Significance of the Data: Since the calculated value of $\bar{x}^2$ exceeds the critical value, the null hypothesis is disproved, and the affirmative hypothesis is accepted: The age distribution of students in the "Study Unlimited" program is different

than the age distribution of college district residents. However, it should be noted by comparing this data with that in Tables 1 and 2 that more older persons are served in the "Study Unlimited" program than in the general college programs. Thus, the "Study Unlimited" student population more closely resembles the general district population than does the population of all college programs.

Hypothesis 6: The proportion of students enrolled in "Study Unlimited" who are members of the female sex is no greater than the proportion of similar college district residents.

Data Resulting from the Study: Table 11 just below presents a summary of the data collected in relation to membership in the sexes in the two populations.

TABLE 11
DISTRIBUTION OF POPULATIONS BY SEX

	Study Unlimited		College District	
	Number	Percentage	Number	Percentage
Male	138	42.2	115,555	48.7
Female	189	57.8	121,690	51.3
Total	327	100.0	237,245	100.0
Unknown	1			

In the data for students enrolled in "Study Unlimited," the sex of one individual was unknown. This fact was noted above, but the student was not included in the statistical analysis.

Analysis of the Data: A two-tailed $\bar{X}^2$ test at a critical level of confidence of .05 was used to determine if there was a statistically significant difference between the distribution of the two populations by sex. In Table 12, which summarizes the calculation of this test, f_o refers to the "Study Unlimited" student population, and f_e refers to the district population as reported in the 1970 U.S. Census. The numbers under f_o and f_e refer to percentages of the totals for each of these groups.

TABLE 12: CALCULATION OF $\bar{X}^2$

Cell	f_o	f_e	f_o-f_e	$(f_o-f_e)^2$	$\frac{(f_o-f_e)^2}{f_e}$
Male	47	48.7	-1.7	2.89	.059
Female	53	51.3	1.7	2.89	.056

$\bar{X}^2 = .115$

$\alpha = .05$
$df = 1$
$\alpha = 3.84$

$$\bar{X}^2 = \sum \left[\frac{(f_o-f_e)^2}{f_e} \right]$$

f_o=observed frequency
f_e=expected frequency

Significance of the Data: Since the calculated value of $\bar{X}^2$ does not exceed the critical value, the null hypothesis was retained: The proportion of students enrolled in "Study Unlimited"

who are members of the female sex is no greater than the proportion of similar college district residents. Although there is a difference in the proportionate enrollments of women in the two programs, with about 6.5% more women being enrolled in the "Study Unlimited" program, still the difference is not great enough to be of statistical significance.

Hypothesis 7: The distribution of "Study Unlimited" students according to membership in ethnic/racial groups is no different than the distribution of college district residents.

Data Resulting from the Study: Table 13 just below presents a a summary of the data collection in relation to membership in ethnic/racial groups in the two populations.

TABLE 13

DISTRIBUTION OF POPULATIONS BY MEMBERSHIP IN ETHNIC/RACIAL GROUPS

	Study Unlimited		College District	
	Number	Percentage	Number	Percentage
White	246	88.5	228,424	96.3
Black	15	5.4	7,990	3.4
Other	17	6.1	831	.3
Total	278	100.0	237,245	100.0
Unknown	50			

In the data for students enrolled in "Study Unlimited," the ethnic/racial group membership of 50 individuals was not known. This fact was noted above, but these students were not included in the statical analysis.

Analysis of the Data: A two-tailed $\bar{X}^2$ test at a level of confidence of .05 was used to determine if there was a statistically significant difference in the distribution of the two populations on the basis of membership in ethnic/racial groups. In Table 14, which summarizes the calculation of this test, f_o refers to the "Study Unlimited" student population, and f_e refers to the district population as reported in the 1970 U.S. Census. The numbers under f_o and f_e refer to percentages of the totals for each group.

TABLE 14: CALCULATION OF $\bar{X}^2$

Cell	f_o	f_e	f_o-f_e	$(f_o-f_e)^2$	$\frac{(f_o-f_e)^2}{f_e}$
White	88.5	96.3	-7.8	60.84	.63
Black	5.4	3.4	2.0	4.00	1.18
Other	6.1	.3	5.8	33.64	112.13
				$\bar{X}^2$ =	113.94

α=.05
df=2
α=5.99

$$\bar{X}^2 = \sum \left[\frac{(f_o-f_e)^2}{f_e} \right]$$

f_o=observed frequency
f_e=expected frequency

Significance of the Data: Since the calculated value of $\overline{x}^2$ exceeds the critical value, the null hypothesis was rejected and the corresponding affirmative hypothesis accepted: The distribution of "Study Unlimited" students according to membership in ethnic/racial groups is different than the distribution of college district residents. The information included in Table 14 shows that the major difference occurs in the percentage of "Other" racial/ethnic group members. However, as has been explained earlier, the 1970 U.S. Census was inadequate in its identification of the Hispanic group, and the major reason for the difference between the two populations was in the proportionately larger number of Hispanics identified in the "Study Unlimited" student population. Therefore, it is difficult to reach any significant conclusions from this analysis of data.

Hypothesis 8: The proportion of students in the "Study Unlimited" program who are employed is no greater than the proportion of similar college district residents..

Data Resulting from the Study: Table 15 just below presents a summary of the data collected in relation to the employment of individuals in the two population groups.

TABLE 15
EMPLOYMENT STATUS OF
INDIVIDUALS

	Study Unlimited		College District	
	Number	Percentage	Number	Percentage
Workers	180	65.5	85,641	69
Unemployed	95	34.5	37,904	31
Total	275	100.0	123,545	100
Unknown	53			

In the data for students enrolled in "Study Unlimited," the employment status of 53 individuals was unknown. This fact was noted in Table 15, but these students were not included in the statistical analysis.

Analysis of the Data: A two-tailed $\bar{X}^2$ test at a level of confidence of .05 was used to determine if there was a statistically significant difference in the distribution of the two populations on the basis of employment status. In Table 16, which summarizes the calculation of this test, f_o refers to the "Study Unlimited" student population, and f_e refers to the district population as reported in the 1970 U.S. Census. The numbers under f_o and f_e refer to percentages of the totals for each group.

TABLE 16: CALCULATION OF $\bar{X}^2$

Cell	f_o	f_e	f_o-f_e	$(f_o-f_e)^2$	$\frac{(f_o-f_e)^2}{f_e}$
Workers	65.5	69	-3.5	12.25	.178
Unemployed	34.5	31	3.5	12.25	.395
				$\bar{X}^2$ =	.573

$\alpha = .05$
$df = 1$
$\alpha = 3.84$

$$\bar{X}^2 = \sum\left[\frac{(f_o-f_e)^2}{f_e}\right]$$

f_o=observed frequency

f_e=expected frequency

Significance of the Data: Since the calculated value of $\bar{X}^2$ does not exceed the critical value, the null hypothesis was retained: The proportion of students in the "Study Unlimited" program who are employed is no greater than the proportion of similar college district residents.

Hypothesis 9: The proportion of students in the "Study Unlimited" program who are married is no greater than the proportion of similar college district residents.

Data Resulting from the Study: Table 17 just below presents a summary of the data collected in relation to the marital status of individuals in the two population groups.

TABLE 17
MARITAL STATUS

	Study Unlimited		College District	
	Number	Percentage	Number	Percentage
Married	155	61.8	118,103	66.2
Single	96	38.2	60,172	33.8
Total	251	100.0	178,275	100.0
Unknown	77			

In the data for students enrolled in "Study Unlimited," the marital status of 77 individual was unknown. This fact was noted in Table 17, but these students were not included in the statistical analysis.

Analysis of the Data: A two-tailed $\bar{X}^2$ test at a level of confidence of .05 was used to determine if there was a statistically significant difference in the distribution of the two populations on the basis of marital status. In Table 18, which summarizes the calculation of this test, f_o refers to the "Study Unlimited" student population, and f_e refers to the district population as reported in the 1970 U.S. Census. The numbers under f_o and f_e refer to percentages of the totals of each groups.

TABLE 18: CALCULATION OF $\bar{X}^2$

Cell	f_o	f_e	f_o-f_e	$(f_o-f_e)^2$	$\frac{(f_o-f_e)^2}{f_e}$
Married	61.8	66.2	-4.4	19.36	.292
Single	38.2	33.8	4.4	19.36	.573
					$\bar{X}^2$ = .865

α = .05
df = 1
χ = 3.84

$$\bar{X}^2 = \sum \left[\frac{(f_o-f_e)^2}{f_e} \right]$$

f_o = observed frequencies
f_e = expected frequencies

Signficance of the Data: Since the calculated value of $\bar{X}^2$ does not exceed the critical value, the null hypothesis was retained: The proportion of students in the "Study Unlimited" program

who are married is no greater than the proportion of similar college district residents.

Hypothesis 10: On the average, "Study Unlimited" students do not resemble "New Students."

Data Resulting from the Study: In testing this hypothesis, a statistical descriptive analysis of students enrolled in "Study Unlimited" was made, resulting in a statistical profile in relation to the following characteristics: number of married men, number of married women, average age, and the number of "Study Unlimited" students who were new to Black Hawk College. Information included in Table 19 just below summarizes the results of this analysis:

TABLE 19
PROFILE OF "STUDY UNLIMITED" STUDENTS

Marital Status

Number For Whom Information Was Available:	252	
Number of Married Men:	56	22.2%
Number of Married Women:	97	38.5%
Number of Those Married:	153	60.7%

*Average Age

Mean	30.28	years
Median	27	years
Mode	22	years
Standard Deviation	10.76	
Percentage over 24	60.07%	

Student Status

Number of Old Students	176	53.7%
Number of New Students	152	46.3%
Total	328	100.0%

*Appendix B contains a summary of the data and methods used for this information.

Significance of the Data: Without comparable data on the general college population, it is difficult to reach any conclusion from this sort of a statistical profile of students. However, it is significant to note that, once again, "Study Unlimited" students seem to be considerably older than the typical community college student, something that was evident in earlier statistical tests. And, as might be expected from an older group, a large number of students in the "Study Unlimited" program are married. One definition of the "New Student" suggests that he/she is married and older than traditional community college age. This statistical profile of "Study Unlimited" students suggests that such is the case with students enrolled in the program. In addition, a substantial number of students enrolled in the "Study Unlimited" program are new to Black Hawk College--approximately 46.3%. Once again, without comparable data on the entire college population, it is difficult to reach any conclusion based on this data; however, it can be said that "Study Unlimited" enrollment comes from a significant number of students who are new to Black Hawk College. Once again, then, viewed in another way, the "Study Unlimited" program seems to enroll students resembling the "New Student."

XI. CONCLUSIONS AND SIGNIFICANCE

This study had two basic purposes: (1) to determine whether or not "Study Unlimited" is serving a student population that is more similar to the total population of the college district than is the general college population and (2) to determine whether or not "Study Unlimited" is serving students that may be called "New Students" to a greater extent than is the total college.

Initially, it should be emphasized that the comparisons necessary to reach conclusions in relation to these two points are, in some respects, impossible because of inadequacies in existing data. First of all, the major recognized source of data on the population in general is the 1970 U.S. Census. However, in relation to this study, data from this source is inadequate in two respects: it is out-of-date, and it does not identify satisfactorily racial/ethnic minorities other than "Black." Second, existing student data at Black Hawk College is inadequate in three respects: it does not allow for the computation of average student age; it does not include information on marital status of students; and it does not include information on student employment. Although such information is included on student admissions forms, its need has not been recognized institutionally, and, therefore, it has not been compiled and made available within the institution.

In addition, it is difficult to reach conclusions in relation to the comparisons involved in these two main purposes because, as has been indicated above, there is a great deal of confusion and controversy in defining "New Students."

Noting these limitations, some conclusions are possible in relation to the purposes of this study. First of all, in many significant ways, the student population in "Study Unlimited" differs from the general college population. This population is different in age distribution, with proportionally fewer students of traditional community college age, or aged 18-20, and proportionally more students between the ages of 25 and 35. Second, proportionally more "Study Unlimited" students are part-time students than is true of the general college population. However, in two other ways, the "Study Unlimited" student population is very similar to the general college population: sex membership and membership in ethnic/racial groups.

Second, in many significant ways, the student population in "Study Unlimited" is similar to the population of the college district: sex membership, employment status, and marital status. Although the "Study Unlimited" student population differs from the college district population in ethnic/racial group membership, such a conclusion is faulty because of inadequacies in the 1970 U.S. Census in identifying Hispanic group membership. Although the "Study Unlimited" student population differs from the college district population in distribution by age, it should be noted that it resembles that population in this respect more closely than does the general college population because "Study Unlimited" enrolls a significantly larger number of older students.

Therefore, in many ways, "Study Unlimited" seems to be serving a student population that may be called "New Students." Over 82%

of its students are classified as part-time students; over 65% are employed; over 61% are married; over 60% are aged 25 or over, the mean student age being 30.28 years; and over 46% of its students are new to Black Hawk College. However, in two significant ways in relation to the data analyzed in the study, "Study Unlimited" is not serving the "New Student." Because the distribution of its population among racial/ethnic groups and by sex is no different than that found in the general college population, it can be concluded that the program is not serving ethnic/racial minority groups or women to any greater extent than all college programs. In this way, the "Study Unlimited" student population differs significantly from "New Students," as the terms is defined in much of the current literature.

These findings are significant in the following ways. First of all, they suggest that an off-campus program that seeks to offer college courses in locations close to the student's home or place of employment and to provide flexible scheduling by the use of instructional media can serve student populations previously unserved by the college--especially the employed adult who wishes to enroll on a part-time basis and who has never before attended Black Hawk College. Additionally, they suggest that, if the college wishes to increase enrollments from these types of students, it should expand existing programs of this type with these characteristics or create new ones.

XII. FURTHER STUDIES

Additional demographic studies of "Study Unlimited" students are needed. First of all, they should be repeated regularly to see

if there is any significant change in the student population, especially as the program expands into new locations. For example, the addition of the Rock Island Public Library to the program in August, 1976, could ultimately affect the distribution of "Study Unlimited" students among racial groups because that library is located very close to an area with a heavy concentration of Blacks. Second, they should include a consideration of characteristics not included in this study: the economic level of homes from which students come, the major motivation for the student's enrollment, and the student's past academic record. A further study including a consideration of these characteristics could reach stronger conclusions on whether or not the program is attracting "New Students" to the college. However, such a study would require improved procedures to compile and retrieve student data.

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APPENDIX A: 1970 Population by Age in the College District
(from the 1970 U.S. Census)

Age	Rock Island County	Mercer County	Henry County	Total
1	3662	346	1103	5111
2	3662	346	1103	5111
3	3662	346	1103	5111
4	3662*	346*	1103*	5111*
5	3236	331	1066	4633
6	3251	351	1032	4634
7	3419	366	1084	4869
8	3419	366	1084	4869
9	3419*	366*	1084*	4869*
10	3357	382	1141	4880
11	3357	382	1141	4880
12	3357	382	1141	4880
13	3357*	382*	1141*	4880*
14	3280	376	1036	4692
15	3147	326	1048	4521
16	3202	334	1014	4550
17	3075	352	1011	4438
18	2923	226	839	3988
19	2733	212	688	3633
20	2439	142	597	3178
21	2498	182	554	3234
22	2439	207	640	3286
23	2439	207	640	3286
24	2439*	207*	640*	3286*

*1970 census figures group statistics for the following age groups: under 5, 7-9, 10-13, 22-24. To estimate the number at individual ages within these groups, the mean for each group was used.

APPENDIX B: Calculation of Average Age of "Study Unlimited" Students

Age	Number	Age	Number	Age	Number	Age	Number
16	1	27	15	38	4	49	1
17	1	28	9	39	7	51	2
18	15	29	10	40	5	52	1
19	15	30	7	41	5	54	1
20	15	31	14	42	2	55	4
21	11	32	9	43	3	56	4
22	19	33	12	44	3	58	1
23	10	34	5	45	3	59	1
24	15	35	1	46	1	61	1
25	7	36	4	47	1	62	1
26	13	37	6	48	5	63	1
						67	2

Unknown: 58
Total: 331

MEAN	30.28 years
MEDIAN	27.00 years
MODE	22.00 years
STANDARD DEVIATION	10.76
PERCENT OVER 24	60.07

$$S = \sqrt{\frac{N[\Sigma X^2]-[\Sigma X]^2}{N^2}}$$

$$S = \sqrt{\frac{273[281946]-[8267]^2}{74529}}$$

$$S = \sqrt{115.768}$$

$$S = 10.76$$

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